

FIG. 1

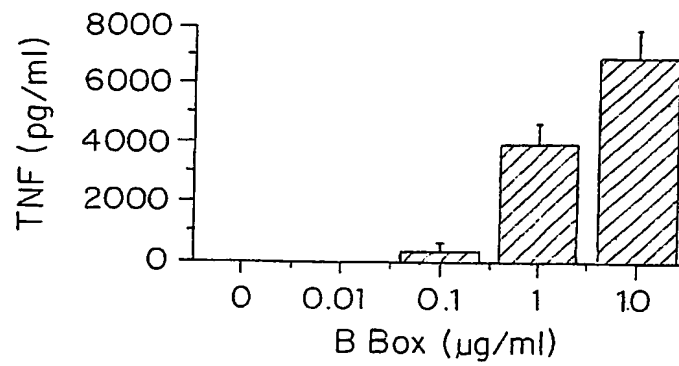


FIG. 2A

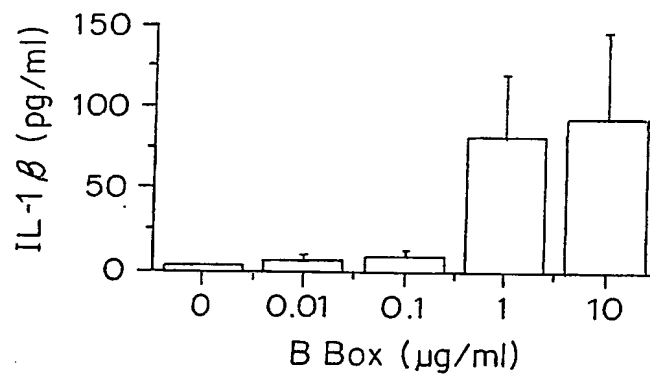


FIG. 2B

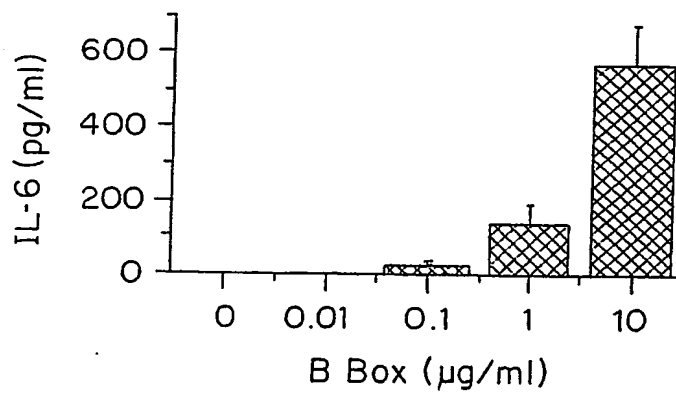


FIG. 2C

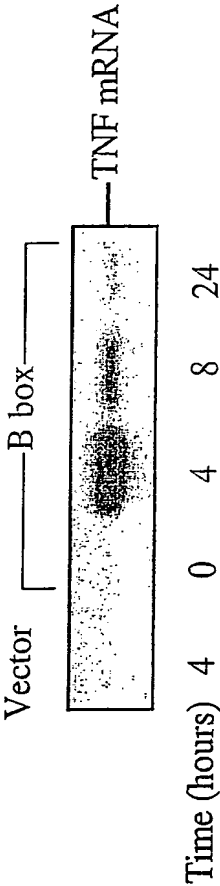


FIG. 2D

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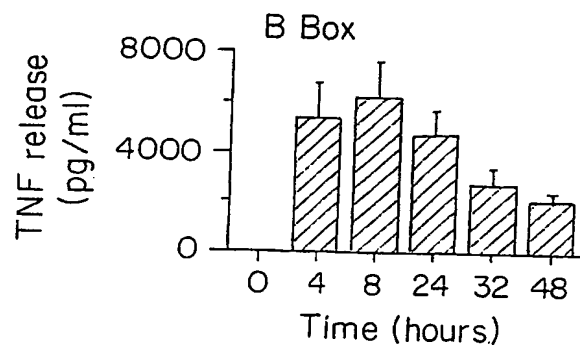


FIG. 2E

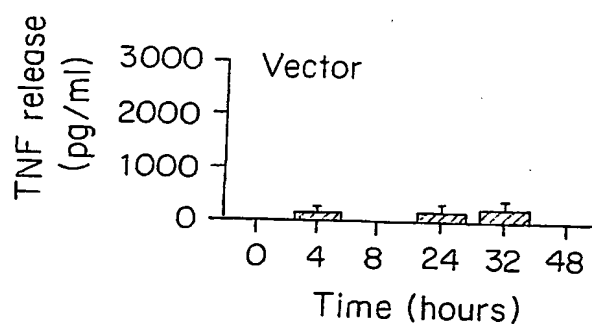


FIG. 2F

B box mutants	TNF release (pg/ml)
B box: 74 amino acids	5675±575
1-20	2100±756
16-35	100±10
30-49	120±75
45-64	100±36
60-74	100±20

FIG. 3

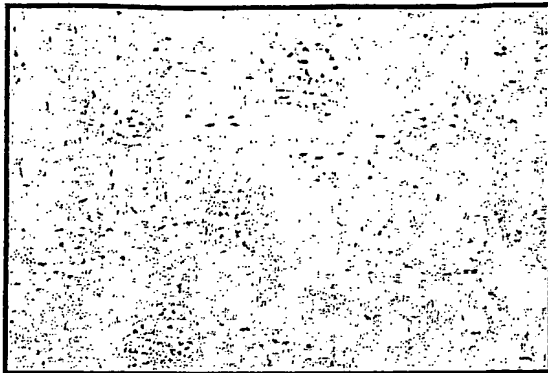


FIG. 4A

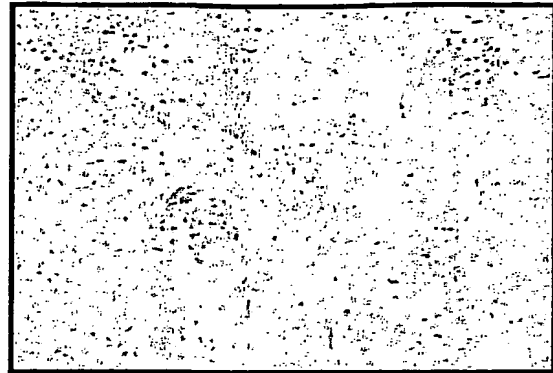


FIG. 4B

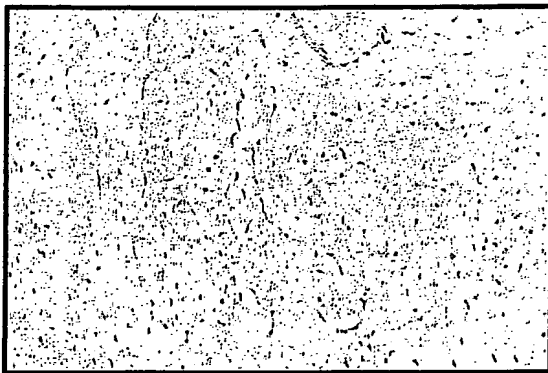


FIG. 4C

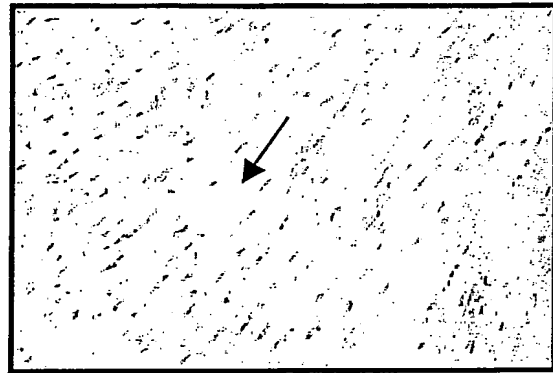


FIG. 4D

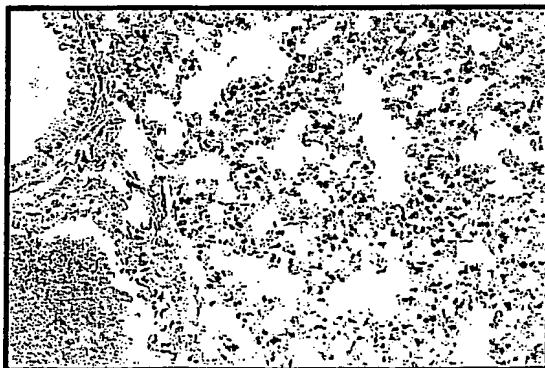


FIG. 4E

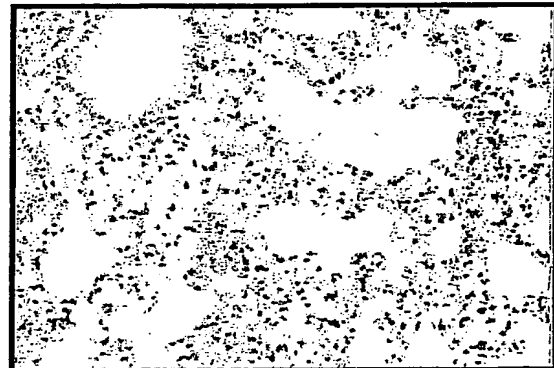


FIG. 4F

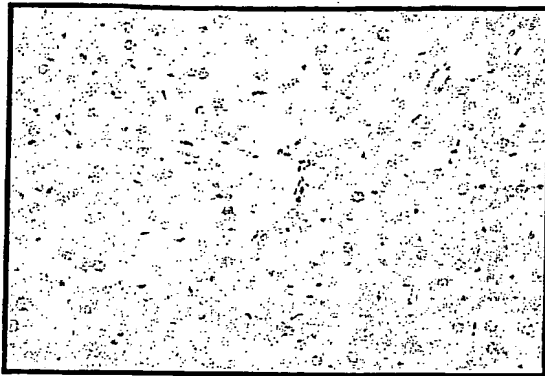


FIG. 4G

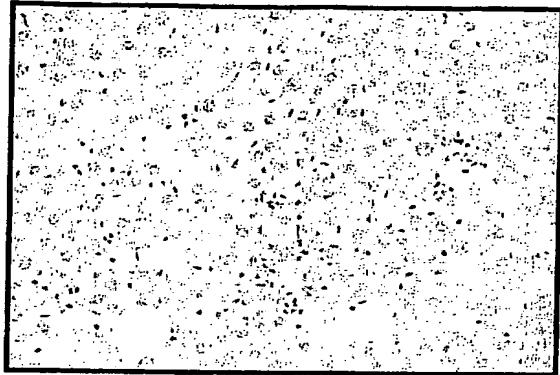


FIG. 4H



FIG. 4I



FIG. 4J

FIG. 5A

SEQ ID NO:1 - Human HMG1 amino acid sequence

1 mgkgdppkpr gkmssyaffv qtcreehkkk hpdasvnfse fskkcserwk tmsakekgkf
61 edmakadkar yeremktyip pkgetkkkfk dpnapkrpps afflfcseyr pkikgehppl
121 sigdvakklg emwnntaadd kqpyekkaak lkekyekdia ayrakgkpda akkgvvkaek
181 skkkkeeed eedeedeeee edeededeee dddde

FIG. 5B

SEQ ID NO:2 - Mouse and Rat HMG1 amino acid sequence

1 mgkgdppkpr gkmssyaffv qtcreehkkk hpdasvnfse fskkcserwk tmsakekgkf
61 edmakadkar yeremktyip pkgetkkkfk dpnapkrpps afflfcseyr pkikgehppl
121 sigdvakklg emwnntaadd kqpyekkaak lkekyekdia ayrakgkpda akkgvvkaek
181 skkkkeeed eedeedeeee eeededeeee dddde

FIG. 5C

SEQ ID NO:3 - HUMAN HMG2 amino acid sequence

1 mgkgdppkpr gkmssyaffv qtcreehkkk hpdssvnfae fskkcserwk tmsakekskf
61 edmaksdkar ydremknyvp pkgdkkgkkk dpnapkrpps afflfcsehr pkiksehppl
121 sigdtakklg emwseqsakd kqpyeqkaak lkekyekdia ayrakgksea gkkgpgrptg
181 skkknepede eeeeeeded eeededede

FIG. 5D

SEQ ID NO:4 - Human, mouse and rat HMG1 A box protein sequence

1 pdasvnfsef skkcserwkt msakekgkfe dmakadkary eremktyipp kget

FIG. 5E

SEQ ID NO:5 - Human, mouse and rat HMG1 B box protein sequence

1 napkrppsaf flfcseyrpk ikgehpplsi gdvakklgem wnntaaddkq pyekkaaklk
61 ekyekdiaa

FIG. 5F

SEQ ID NO:6 - forward PCR primer for human HMG1

gatgggcaaaggagatcctaag.

FIG. 5G

SEQ ID NO:7 - reverse PCR primer for human HMG1

gcggccgcttattcatcatcatcttc

FIG. 5H

SEQ ID NO:8 - forward PCR primer for -C mutant of human HMG1

gatgggcaaaggagatcctaag

FIG. 5I

SEQ ID NO:9 - reverse PCR primer for -C mutant of human HMG1

gcggccgctcacttgctttttcagccttgac

FIG. 5J

SEQ ID NO:10 - forward PCR primer for A+B boxes mutant of human HMG1

gagcataagaagaagcaccca

FIG. 5K

SEQ ID NO:11 - reverse PCR primer for A+B boxes mutant of human HMG1

gcggccgc tcacttgctttttcagccttgac

FIG. 5L

SEQ ID NO:12 - forward PCR primer for B box mutant of human HMG1

aagttcaaggatcccaatgcaaag

FIG. 5M

SEQ ID NO:13 - reverse PCR primer for B box mutant of human HMG1

gcggccgctcaatatgcagctatccttttc

FIG. 5N

SEQ ID NO:14 - forward PCR primer for N'+A box mutant of human HMG1

gatgggcaaaggagatcctaag

FIG. 5O

SEQ ID NO:15 - reverse PCR primer for N'+A box mutant of human HMG1

tcactttttgtctccccttggg

1 mgkgdppkpr gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf *rat* # P07155
1 mgkgdppkpr gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf *mouse* #AAA20508
1 mgkgdppkpt gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf *human* #AAA64970

A box

61 edmakadkar yeremktyip pkgetkkkf dnapkrpps afflcseyr pkikgehppl *rat*
61 edmakadkar yeremktyip pkgetkkkf dnapkrpps afflcseyr pkikgehppl *mouse*
61 edmakadkar yeremktyip pkgetkkkf dnapkrpps afflcseyr pkikgehppl *human*

B box

121 sigdvakklg emwnntaadd kqpyekkaak lkeyekdia ayrakgkpa akkgvvkaek *rat*
121 sigdvakklg emwnntaadd kqpyekkaak lkeyekdia ayrakgkpa akkgvvkaek *mouse*
121 sigdvakklg emwnntaadd kqpyekkaak lkeyekdia ayrakgkpa akkgvvkaek *human*

181 skkkkeeedd eedeedeeee eede deee dddde *rat*
181 skkkkeeedd eedeedeeee eede deee dddde *mouse*
181 skkkkeeedd eedeedeeee edeede deee dddde *human*

FIG. 6

FIG. 7A

NG_000897 DNA (bases 150-797)

```

ATGGGCAAAG GAGATCCTAA GAAGCCGACA GGCAAAATGT CATCATATGC
ATTTTTTTGTG CAAACTTGTC GGGAGGAGCA TAAGAAGAAG CACCCAGATG
CTTCAGTCAA CTTCTCAGAG TTTTCTAAGA AGTGCTCAGA GAGGTGGAAG
ACCATGTCTG CTAAAGAGAA AGGAAAATTT GAAGATATGG CAAAGGCGGA
CAAGGCCCGT TATGAAAGAG AAATGAAAAC CTATATCCCT CCCAAAGGGG
AGACAAAAAA GAAGTTCAAG GATCCCAATG CACCCAAGAG GCTTCCTTCG
GCCTTCTTCC TCTTCTGCTC TGAGTATCGC CCAAAAATCA AAGGAGAACA
TCCTGGCCTG TCCATTGGTG ATGTTGCGAA GAAACTGGGA GAGATGTGGA
ATAACACTGC TGCAGATGAC AAGCAGCCTT ATGAAAAGAA GGCTGCGAAG
CTGAAGGAAA AATACGAAAA GGATATAGCT GCATATCGAG CTAAAGGAAA
GCCTGATGCA GCAAAAAAGG GAGTTGTCAA GGCTGAAAAA AGCAAGAAAA
AGAAGGAAGA GGAGGAAGAT GAGGAAGATG AAGAGGATGA GGAGGAGGAG
GAAGATGAAG AAGATGAAGA AGATGAAGAA GAAGATGATG ATGATGAA

```

FIG. 7B

NG_000897 Protein

```

MGKGDPKKPT GKMSYAFFV QTCREEHKKK HPDASVNFSE FSKKCSERWK
TMSAKEKGKF EDMAKADKAR YEREMKTYIP PKGETKKKFK DPNAKRLPS
AFFLFCSEYR PKIKGEHPGL SIGDVAKKLG EMWNNTAADD KQPYEKKA
LKEKYEKDIA AYRAKGKPD AAKGVVKA EKSKKKKEEEED EDEEDEEEEE
EDEEDEEEEE EDDDDDE

```

FIG. 7C

AF076674 DNA (bases 1-633)

```

ATGGGCAAAG GAGATCCTAA GAAGCCGAGA GGCAAAATGT CATCATATGC
ATTTTTTTGTG CAAACTTGTC GGGAGGAGCA TAAGAAGAAG CACTCAGATG
CTTCAGTCAA CTTCTCAGAG TTTTCTAACA AGTGCTCAGA GAGGTGGAAG
ACCATGTCTG CTAAAGAGAA AGGAAAATTT GAGGATATGG CAAAGGCGGA
CAAGACCCAT TATGAAAGAC AAATGAAAAC CTATATCCCT CCCAAAGGGG
AGACAAAAAA GAAGTTCAAG GATCCCAATG CACCCAAGAG GCCTCCTTCG
GCCTTCTTCC TGTTCTGCTC TGAGTATCAC CCAAAAATCA AAGGAGAACA
TCCTGGCCTG TCCATTGGTG ATGTTGCGAA GAAACTGGGA GAGATGTGGA
ATAACACTGC TGCAGATGAC AAGCAGCCTG GTGAAAAGAA GGCTGCGAAG
CTGAAGGAAA AATACGAAAA GGATATTGCT GCATATCAAG CTAAAGGAAA
GCCTGAGGCA GCAAAAAAGG GAGTTGTCAA AGCTGAAAAA AGCAAGAAAA
AGAAGGAAGA GGAGGAAGAT GAGGAAGATG AAGAGGATGA GGAGGAGGAA
GATGAAGAAG ATGAAGAAGA TGATGATGAT GAA

```

FIG. 7D

AF076674 Protein

```

MGKGDPKKPR GKMSYAFFV QTCREEHKKK HSDASVNFSE FSNKCSERWK
TMSAKEKGKF EDMAKADKTH YERQMKTYIP PKGETKKKFK DPNAKRLPS
AFFLFCSEYH PKIKGEHPGL SIGDVAKKLG EMWNNTAADD KQPGKKKA
LKEKYEKDIA AYQAKGKPEA AAKGVVKA EKSKKKKEEEED EDEEDEEEEE
DEEDEEDDDD E

```

FIG. 7E**AF076676 DNA (bases 1-564)**

```
ATGGGCAAAG GAGACCCTAA GAAGCCGAGA GGCAAAATGT CATCATATGC
ATTTTTTTGTG CAAACTTGTC GGGAGGAGTG TAAGAAGAAG CACCCAGATG
CTTCAGTCAA CTTCTCAGAG TTTTCTAAGA AGTGCTCAGA GAGGTGGAAG
GCCATGTCTG CTAAAGATAA AGGAAAATTT GAAGATATGG CAAAGGTGGA
CAAAGACCGT TATGAAAGAG AAATGAAAAC CTATATCCCT CCTAAAGGGG
AGACAAAAAA GAAGTTCGAG GATTCCAATG CACCCAAGAG GCCTCCTTCG
GCCTTTTTGC TGTTCCTGCTC TGAGTATTGC CAAAAATCA AAGGAGAGCA
TCCTGGCCTG CCTATTAGCG ATGTTGCAAA GAAACTGGTA GAGATGTGGA
ATAACACTTT TGCAGATGAC AAGCAGCTTT GTGAAAAGAA GGCTGCAAAG
CTGAAGGAAA AATACAAAAA GGATACAGCT ACATATCGAG CTAAAGGAAA
GCCTGATGCA GCAAAAAGG GAGTTGTCAA GGCTGAAAAA AGCAAGAAAA
AGAAGGAAGA GGAG
```

FIG. 7F**AF076676 Protein**

```
MGKGDPPKPR GKMSYAFFV QTCREECKKK HPDASVNFSE FSKKCSERWK
AMSAKDKGKF EDMAKVDKDR YEREMKTYIP PKGETKKKFE DSNAPKRPPS
AFLLCSEYC PKIKGEHPGL PISDVAKKLV EMWNNTFADD KQLCEKKAAC
LKEKYKKDTA TYRAKGKPD AAKGVVKA EK SKKKKEEE
```

FIG. 7G**AC010149 DNA (bases 75503-76117)**

```
ATGGACAAAG CAGATCCTAA GAAGCTGAGA GGTGAAATGT TATCATATGC
ATTTTTTTGTG CAAACTTGTC AGGAGGAGCA TAAGAAGAAG AACCCAGATG
CTTCAGTCAA GTTCTCAGAG TTTTAAAGA AGTGCTCAGA GACATGGAAG
ACCATTTTTG CTAAAGAGAA AGGAAAATTT GAAGATATGG CAAAGGCCGA
CAAGGCCCAT TATGAAAGAG AAATGAAAAC CTATATCCCT CCTAAAGGGG
AGAAAAAAA GAAGTTCAAG GATCCCAATG CACCCAAGAG GCCTCCTTTG
GCCTTTTTCC TGTTCCTGCTC TGAGTATCGC CAAAAATCA AAGGAGAACA
TCCTGGCCTG TCCATTGATG ATGTTGTGAA GAAACTGGCA GGGATGTGGA
ATAACACCGC TGCAGCTGAC AAGCAGTTTT ATGAAAAGAA GGCTGCAAAG
CTGAAGGAAA AATACAAAAA GGATATTGCT GCATATCGAG CTAAAGGAAA
GCCTAATTCA GCAAAAAGA GAGTTGTCAA GGCTGAAAAA AGCAAGAAAA
AGAAGGAAGA GGAAGAAGAT GAAGAGGATG AACAAGAGGA GGAAAATGAA
GAAGATGATG ATAAA
```

FIG. 7H**AC010149 Protein**

```
MDKADPPKLR GEMLSYAFFV QTCQEEHKKK NPDASVKFSE FLKKCSETWK
TIFAKEKGKF EDMAKADKAH YEREMKTYIP PKGEKKKKFK DPNAPKRPPS
AFLLCSEYR PKIKGEHPGL SIDDVVKKLA GMWNNTAAAD KQFYEKKAAC
LKEKYKKDIA AYRAKGKPN AAKRVVKA EK SKKKKEEEED EEDEQEEENE
EDDDK
```

FIG. 7I

AF165168 DNA (bases 729-968)

ATGGGCAAAG GAGATCCTAA GAAGCCGAGA GGCAAAATGT CATCATGTGC
ATTTTTTGTG CAAACTTGTT GGGAGGAGCA TAAGAAGCAG TACCCAGATG
CTTCAATCAA CTTCTCAGAG TTTTCTCAGA AGTGCCCAGA GACGTGGAAG
ACCACGATTG CTAAAGAGAA AGGAAAATTT GAAGATATGC CAAAGGCAGA
CAAGGCCCAT TATGAAAGAG AAATGAAAAC CTATATACCC

FIG. 7J

AF165168 Protein

MGKGDPKKPR GKSSCAFFV QTCWEEHKKQ YPDASINFSE FSQKCPETWK
TTIAKEKGKF EDMPKADKAH YEREMKTYIP

FIG. 7K

XM_063129 DNA (bases 319-558)

AAACAGAGAG GCAAAATGCC ATCGTATGTA TTTTGTGTGC AAACCTTGTCC
GGAGGAGCGT AAGAAGAAAC ACCCAGATGC TTCAGTCAAC TTCTCAGAGT
TTTCTAAGAA GTGCTTAGTG AGGGGGAAGA CCATGTCTGC TAAAGAGAAA
GGACAATTTG AAGCTATGGC AAGGGCAGAC AAGGCCCGTT ACGAAAGAGA
AATGAAAACA TATATCCCTC CTAAAGGGGA GACAAAAAAA

FIG. 7L

XM_063129 Protein

KQRGKMPSYV FCVQTCPEER KKKHPDASVN FSEFSKKCLV RGKTMSAKEK
GQFEAMARAD KARYEREMKT YIPPKGETKK

FIG. 7M

XM_066789 DNA (bases 1-258)

ATGGGCAAAA GAGACCCTAA GCAGCCAAGA GGCAAAATGT CATCATATGC
ATTTTTTGTG CAAACTGCTC AGGAGGAGCA CAAGAAGAAA CAACTAGATG
CTTCAGTCAG TTTCTCAGAG TTTTCTAAGA ACTGCTCAGA GAGGTGGAAG
ACCATGTCTG TTAAAGAGAA AGGAAAATTT GAAGACATGG CAAAGGCAGA
CAAGGCCTGT TATGAAAGAG AAATGAAAAT ATATCCCTAC TTAAAGGGGA
GACAAAAA

FIG. 7N

XM_066789 Protein

MGKRDPKQPR GKSSYAFFV QTAQEEHKKK QLDASVSFSE FSKNCSEKWK
TMSVKEKGKF EDMAKADKAC YEREMKIYPY LKGRQK

FIG. 7O

AF165167 DNA (bases 456-666)

ATGGGCAAAG GAGACCCTAA GAAGCCAAGA GAGAAAATGC CATCATATGC
ATTTTTTGTG CAAACTTGTA GGGAGGCACA TAAGAACAAA CATCCAGATG
CTTCAGTCAA CTCCTCAGAG TTTTCTAAGA AGTGCTCAGA GAGGTGGAAG
ACCATGCCTA CTAAACAGAA AGGAAAATTC GAAGATATGG CAAAGGCAGA
CAGGGCCCAT A

FIG. 7P

AF165167 Protein

MGKGDPKKPR EKMPSYAFFV QTCREAHKNK HPDASVNSSE FSKKCSERWK
TMPTKQKGKF EDMAKADRAH